In the Claims

1. (Currently amended) A method for patterning a multilayered conductor/substrate structure comprising the steps of:

providing a multilayered conductor/substrate structure which includes a plastic substrate and at least one conductive layer overlying the plastic substrate; and

irradiating the multilayered conductor/substrate structure with ultraviolet radiation such that portions of the at least one conductive layer are ablated therefrom;

wherein the irradiating step comprises employing an excimer laser of a projection-type ablation system to ablate portions of the at least one conductive layer by

illuminating a mask with a collimated laser beam and

employing projection optics positioned between the mask and the at least one conductive layer to project a pattern from the mask onto the at least one conductive layer.

2. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the ultraviolet radiation is spatially incoherent.

3. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the ultraviolet radiation has a wavelength in the mid-UV range.

4. (Canceled)

5. (Currently amended) The method for patterning a multilayered conductor/substrate structure of ~~claim 4~~ claim 1 wherein the step of employing the excimer laser comprises ~~controlling~~ selecting the excimer laser ~~in consideration of how well~~ depending upon radiation absorption of the at least one conductive layer ~~absorbs radiation~~ at particular wavelengths.

6. (Canceled)

7. (Currently amended) The method for patterning a multilayered conductor/substrate structure of ~~claim 6~~ claim 1 wherein the pattern includes a line gap ~~which is at least as small as~~ 10 μm or smaller.

8. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the multilayered conductor/substrate structure further comprises at least one functional layer intermediate the at least one conductive layer and the plastic substrate, the at least one functional layer comprising an insulating material.

9. (Currently amended) The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the irradiating step comprises employing and controlling ~~an~~ the excimer laser to irradiate a portion of the at least one conductive layer such that a portion of the at least one functional layer therebeneath heats via thermal conduction through the at least one conductive layer and swells ~~a desired amount~~ to assist in ablating the portion of the at least one conductive layer.

10. (Currently amended) The method for patterning a multilayered conductor/substrate structure of claim 9 wherein the step of controlling the excimer laser comprises controlling a fluence of the excimer laser ~~in consideration of~~ depending upon an ablation threshold level of the at least one conductive layer.

11. (Original) The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the irradiating step comprises employing and controlling an excimer laser to ablate portions of the at least one conductive layer without completely decomposing the at least one functional layer therebeneath.

12-15. (Canceled)

16. (Currently amended) The method for patterning a multilayered conductor/substrate structure of ~~claim 4~~ claim 1 wherein the excimer laser is ~~configured~~ selected to emit light at a discrete characteristic wavelength.

17. (Original) The method for patterning a multilayered conductor/substrate structure of claim 16 wherein the characteristic wavelength is 308 nm.

18. (Original) The method for patterning a multilayered conductor/substrate structure of claim 16 wherein the characteristic wavelength is 248 nm.

19. (Currently amended) The method for patterning a multilayered conductor/substrate structure of ~~claim 4~~ claim 1 wherein the ~~excimer laser is part of an ablation system configured to facilitate~~ steps of providing and irradiating the multilayered conductor/substrate structure are part of a roll-to-roll production process.

20. (Currently amended) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the plastic substrate comprises ~~polyethylene terephthalate (PET),~~ polyethylenenapthalate (PEN)~~,~~ or polyethersulphone (PES) ~~or polycarbonate (PC)~~.

21. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the plastic substrate comprises a polyolefin material.

22. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises an oxide layer.

23. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises an indium tin oxide (ITO) layer.

24. (Original) The method for patterning a multilayered conductor/substrate structure of claim 23 wherein the ITO layer is polycrystalline.

25. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises an alloy.

26. (Original) The method for patterning a multilayered conductor/substrate structure of claim 25 wherein the alloy is an indium tin oxide (ITO) alloy.

27. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises a metal-based layer.

28. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises a silver-based layer.

29. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises silver and gold.

30. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer is a multilayered conductive film.

31. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer, where it has not been etched, has a thickness between around 10 nm and around 120 nm.

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32. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer has a resistivity of no greater than 80 Ω/square.

33. (Original) The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer has a transmissivity of at least 80%.

34. (Original) The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the at least one functional layer comprises a protective layer which serves to protect layers beneath the protective layer from laser irradiation.

35. (Original) The method for patterning a multilayered conductor/substrate structure of claim 34 wherein the layers beneath comprise a barrier layer which serves to protect the plastic substrate from environmental damage.

36. (Original) The method for patterning a multilayered conductor/substrate structure of claim 34 wherein the layers beneath include the plastic substrate.

37. (Original) The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the at least one functional layer comprises a layer of acrylic which abuts the at least one conductive layer.

38. (Original) The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the at least one functional layer comprises a barrier layer which serves to protect the plastic substrate from environmental damage.

39. (Original) The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer is inorganic.

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40. (Original) The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer has an oxygen transmission rate (OTR) no greater than 0.05 $cc/m^2/day$.

41. (Original) The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer has a water vapor transmission rate (WVTR) no greater than 0.05 $g/m^2/day$.

42. (Original) The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer comprises a layer of SiOx which abuts the plastic substrate.

43. (Original) The method for patterning a multilayered conductor/substrate structure of claim 8, further comprising:

an additional functional layer abutting a side of the plastic substrate that faces away from the at least one conductive layer, the additional functional layer serving to provide structural protection and/or environmental protection for the plastic substrate.